The Institution of Engineers, Australia; Sydney Division
Engineering Heritage Committee

ORAL HISTORY PROGRAM

INTERVIEWEE : Ray Piesse

INTERVIEWER : Margo Beasley

TAPE NUMBERS :
IEA SYD: MB4
MB5

INTERVIEW DATE : 2/2/2000

NUMBER OF TAPES : 2

RESTRICTION ON USE : None

This log was prepared on a Sony Walkman WM-D6C

INTERVIEW TAPE LOG

This interview took place at 39 Medusa St, Mosman
on 2 February, 2000

This interview is part of the Oral History Project of the Engineering Heritage Committee of the Sydney Division the Institution of Engineers, Australia.

Tape Log

Tape : IEA SYD : MB4, Side A		
COUNT	**SUBJECT**	**NAMES & KEYWORDS**
013	Biographical details	Wagin
O32	Farming in WA, poverty, scholarship, moving.	Albany, Kalyaling
086	Influential teacher	
138	Latter end of depression,	
160	Wins govt scholarship to Albany high school, subjects	
226	Enjoyed study, dux and captain	
245	Family background, liked farming as well as study	
263	Interested in technology, father didn't know much about it	
276	Experience of boarding	
290	Home for holidays, farming	
300	Siblings: their work and later life	
325	Influenced by woodwork, metalwork and mechanical drawing teachers	
345	Very good mathematics teacher, decided to be engineer	
350	Had uncle who was engineer of water supply	
354	Became more interested in physics and mathematics	
360	End of war, govt scholarship scheme for payment of university accommodation and fees	University of Western Australia, Perth
406	Majored in physics and mathematics, interested in astronomy	
425	Study of solar flares in honours year, included radio receiver tracking radio frequency noise from sun	
458	Special project for final years was ultrasonics, first introduction to sound	
472	Studied application of sonics to human body	
490	Returned to farm, worked for neighbours also, got interested in planting crops	
502	Difficult to find work in physics in WA, little industry,	
527	Appointed as senior physicist at Commonwealth Acoustic Laboratories in Sydney, helped by his professor	

End of Side A

Tape :	IEA SYD : MB4 , Side B	
COUNT	**SUBJECT**	**NAMES & KEYWORDS**
012	Work of the CAL: ex-servicemen, children and the health effects of noise in industry and armed services	
O24	Developed out of war work, especially effects of gunfire on hearing and to look at problems of communication in aircraft because of noise	
050	Developed sound-powered hearing communications system for small aircraft	
070	Also looked at ear protection and ear plugs for high altitudes, and ear muffs	
080	Pioneering research between explosions and hearing damage	Norman Murray
105	Murray's idea that govt should look after personnel with hearing problems, Repatriation Department provided hearing aids	
128	Effects of rubella on hearing of children also an issue	
140	CAL set up 1948. Central Laboratory	Erskine House
166	Services provided by psychologists	
184	Employed an audiologist, eventually replaced psychologists	
215	Field of audiology developed, assessing hearing, fitting hearing aids, all trained by CAL until early 1960s	Audiology
245	Size of CAL, branches, staffing	
257	Physicists employed to do developmental work on hearing aids, instrumentation, and noise measurement techniques	
278	Engineers employed on developing hearing aids, all manufactured in Australia at the time, and developing audiometers, and designing facilities for testing hearing	Norman Murray
294	Differences between engineer's work and physicist's work	
299	Description of engineer's work re hearing aids, and physicist's work	
314	Piesse worked on first transistor hearing aid built in Australia	Calaid T
323	Earlier valve operated hearing aids, improvements, development of transistors, advantages	University of Sydney Transistors
365	Three transistor hearing aid – became the basic hearing aid, description, advantages	
389	Manufacture	
410	Work of laboratories, funding, free service, some cutbacks	
449	Growth of service, big increase 1968	
461	Other development activities: instrumentation for calibration purposes	Calibration
488	Importance of calibration	
508	Development of technique for measuring noise in industry with tape recorders	Tape recorders
528	Concern re hearing loss related to industry	
	End of Side B	

Tape Log

Tape : IEA SYD : MB5, Side A		
COUNT	**SUBJECT**	**NAMES & KEYWORDS**
020	Testing hearing in industry, collecting information, began in railway workshops, C1951	Portable audiometers
087	Extensive problems revealed, work continued until 1960s.	Jack Rose
102	Looking at methods of protection	Molded ear plugs
129	Work in the field, mechanical work, engineer	Jack Rose
154	Report `bible' recommending program for hearing conservation, for employers, CAL assistance	
180	Report used by NH and MRC	
203	State Government occupational health people became involved in hearing conservation programs, CAL advised on this.	Noise specialists
227	Some success with industry modification of noise levels	
245	Hearing compensation work	
258	Industrial problem continues, shows in pensioners	
275	Hearing protection work: ear plugs, ear muffs, measured commercial hearing protectors, published report 1962	Report: `Ear Protectors'
308	Consultative advice to armed services; measuring aircraft noise, flyovers, navy ships.	
338	Gunfire brief but damage traumatic	
346	Variations in sensitivity to noise	
360	Promoted to director of National Acoustic Laboratories, had become principal physicist 1964, in charge of electro-acoustics research section	
381	New hearing aid around 1964, thousands made, efficiencies, but not popular	`In the ear' hearing aid
415	Went into `behind the ear' hearing aids, more flexible	
428	Australian audiology compared to services elsewhere	
451	Excellent service in Australia, good range of aids, service largely free	
459	Director's work, responsible for entire operation: research as well as provision and manufacture of hearing aids, supervision of all branch laboratories	
465	Pensioner hearing aid scheme introduced, numbers increased enormously, staff increases, big purchasing program, testing and checking aids	
501	Australia the only country doing everything form design through to fitting	
512	Difficulties of management job, political pressures, commercial operators, inquiries.	Director
	End of Side A	

Tape :	IEA SYD : MB5 , Side B	
COUNT	**SUBJECT**	**NAMES & KEYWORDS**
004	Developed research organization for audiology side.	
011	Psycho-acoustic research, young people, electro-acoustics	Walkmans, gunfire
045	International reputations	Dr Dennis Byrne
056	Modification of hearing aids. Good range of `behind the ear' aids, aids developed for profoundly deaf children	
106	Discussion of new knowledge re effects of noise, changes in noise exposure, more powerful motor bikes, cars, speedboats, walkmans, pop bands	
140	Significant changes amongst young people	
160	Changes in the service, building of new laboratories in Chatswood early 1970s until 1986. World standard facility.	
190	Change in services, more emphasis on encouraging use, after care.	
214	Continued to work on standards relating to acoustic techniques, chairman of two committees	
225	National Association of Testing Authorities' registration advisory committee on acoustics.	
245	Involved hands-on work in acoustic systems, importance of standards, for hearing aids and audiometers, sound level meters	
270	Remains on audiological committee, provides advice to `Self-Help for the Hard of Hearing'	
284	Thought managers should have hands-on experience, but current professional managers very good, services very good.	
326	Discussion of bionic ear, CAL not associated but watched developments closely. Some concerns but good results.	Bionic ear
375	Enjoyed the work, always interested in the field of hearing, very useful to apply, a big help to people, especially young people, something of value	
400	Liked Sydney, no regrets about leaving farm, met wife in the house in which he now lives.	
429	Work of Australian Acoustical Society, for people involved in the field, dissemination of information	
	End of Side B	